



MANUAL PART NUMBER: 400-0099-003

MX2456RM

**6-IN, 1-OUT VIDEO AND
AUDIO SWITCHER
USER'S GUIDE**

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PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **MX2456RM** Switcher. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **MX2456RM** and to prevent fire and shock hazards. Please read them carefully and heed all warnings.

1.1 GENERAL

- Unauthorized personnel shall not open the unit since there are high-voltage components inside.
- Qualified ALTINEX service personnel or its authorized representatives must perform all service.

1.2 RACK-MOUNTING SAFETY GUIDELINES

- The maximum operating ambient temperature for this unit is 35°C.
- Distribute units evenly inside the rack. Hazardous conditions may be created by an uneven weight distribution.
- Connect the unit to a properly rated supply circuit.
- Reliable grounding should be maintained.

1.3 INSTALLATION

- For best results, place the **MX2456RM** Switcher on a flat, level surface in a dry area away from dust and moisture.
- To prevent fire or shock, do not expose this unit to water or moisture. Do not place the **MX2456RM** in direct sunlight, near heaters, or heat-radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Handle the **MX2456RM** Switcher carefully. Dropping or jarring can damage internal components.
- Do not place heavy objects on top of the **MX2456RM**. If the **MX2456RM** is to be mounted to a table or wall, use only ALTINEX-made mounting accessories, such as the rack-mount shelf **DA1298RM** or the rack-mount ears **DA1292FC** and cables for optimum setup.

- To turn off the main power, be sure to remove the cord from the power outlet. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.
- Do not pull the power cord or any cable that is attached to the **MX2456RM** Switcher.
- If the **MX2456RM** Switcher is not used for an extended period, disconnect the power cord from the power outlet.

1.4 CLEANING

- Unplug the **MX2456RM** power cord before cleaning. Clean surfaces with a dry cloth. Never use strong detergents or solvents, such as alcohol or thinner. Do not use a wet cloth or water to clean the unit.

1.5 FCC NOTICE

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Any changes or modifications to the unit not expressly approved by ALTINEX, Inc. could void the user's authority to operate the equipment.

ABOUT YOUR MX2456RM

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MX2456RM

6-IN, 1-OUT VIDEO/AUDIO SWITCHER

The **MX2456 RM** is a video and audio switcher with six video inputs that can be connected to a single video output and has six balanced-stereo audio inputs. These six balanced-stereo audio inputs can be connected to a single balanced-stereo audio output. This allows for the non-simultaneous connection of up to six computers or six video and six audio sources to a monitor or projector and to any audio system.

The **MX2456RM** can pass a variety of video signal types: RGBHV, RGBS, RGsB, Component Video (Y, R-Y, B-Y), S-Video and Composite Video. The **MX2456RM** is controllable by using its built-in front panel or through RS-232.

Each of the video inputs is ground loop isolated and can promote individual equalization of video gain according to different cable lengths.

The **MX2456RM** has a video bandwidth of 300 MHz and an audio bandwidth of 40 kHz.

TECHNICAL SPECIFICATION

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FEATURES/DESCRIPTION	Audio	RGBHV
GENERAL		
Inputs	6	6
Input Connector	5-pin term. blocks	15-pin HD female
Outputs	1	1
Output Connector	5-pin term. blocks	BNC female
Compatibility	Balanced audio	VGA, RGBHV, RGBS, RGsB, & C-Video (Y, R-Y, B-Y)

Table 1. **MX2456RM** General

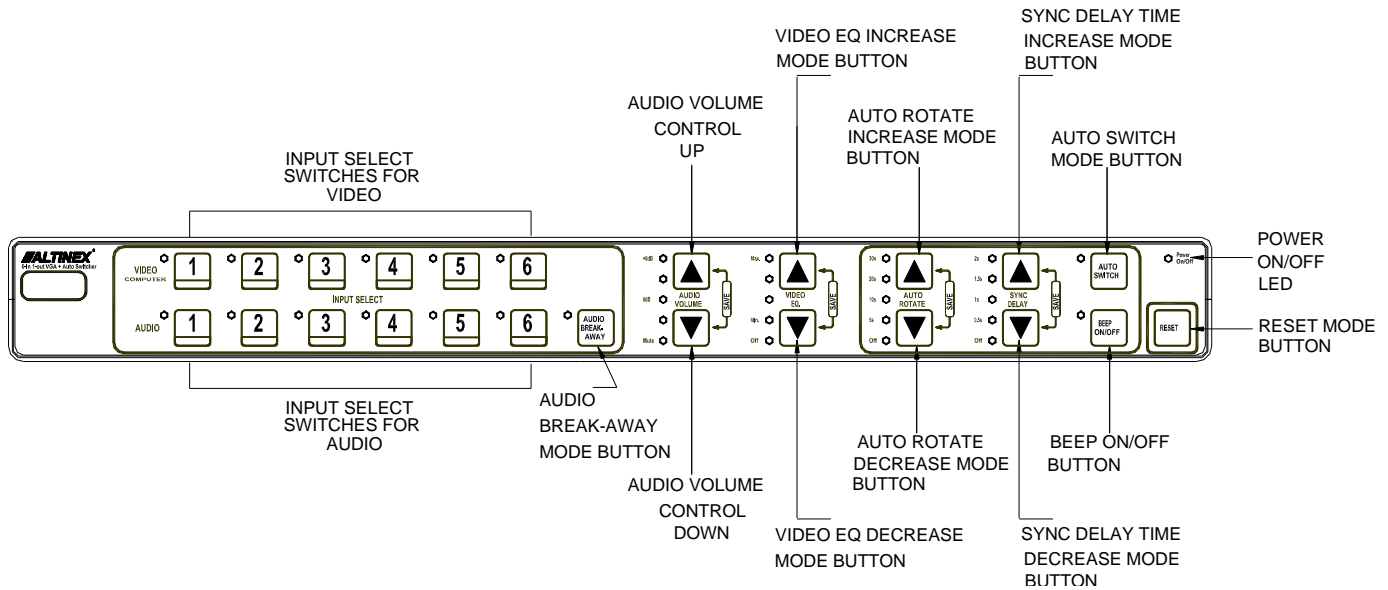
MECHANICAL	MX2456RM
Width (inches)	1.75in (44mm)
Height (inches)	17.00 in (432mm)
Depth (inches)	9.00in (229mm)
Weight (pounds)	5lbs (2.28kg)
Finish	Gray
Front/Rear Panel	Lexan
T° Maximum	50°C
Humidity	90% non-condensing
MTBF (calculations)	40,000 hrs (min)

Table 2. **MX2456RM** Mechanical

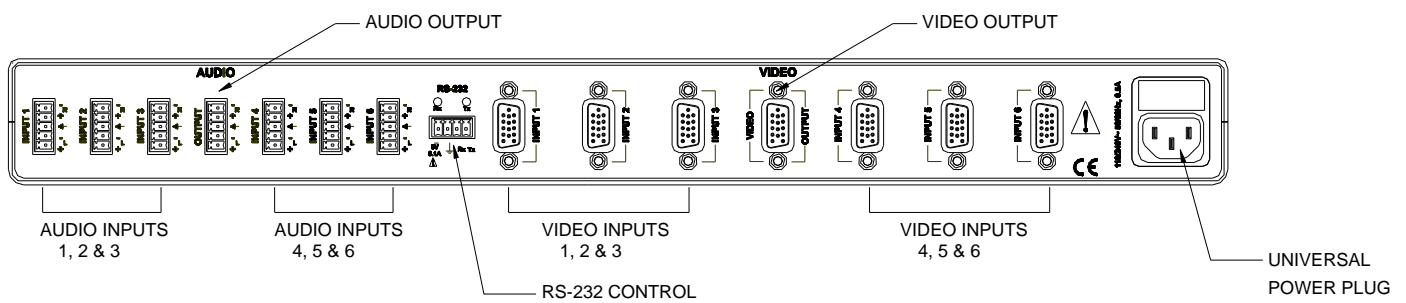
ELECTRICAL	Audio	RGBHV
Input Signal		
Differential	1.8V p-p	-
Analog	-	1.2V p-p
Composite Video	-	-
Impedance	10 k Ohms	75 Ohms
CMRR	80dB @ 10 Hz to 20k Hz	-
Input Sync Signals		
Composite, Horizontal, & Vertical	-	TTL (+/-)
Output Signals		
Analog	-	1.2V p-p
Fall/ Rise Time	-	less than 2.4ns
Impedance	600 Ohms	75 Ohms
Crosstalk	80 dB @ 1kHz	-48dB @ 10 MHz
Differential	1.8Vp-p	-
Signal to Noise Ratio	More than 95 dB	-
Bandwidth	10 Hz – 40 kHz	300MHz
Stereo Signal Separation	More than 60dB @ 20 kHz	-
Output Sync Signals		
Impedance	-	22 Ohms
Power		
External Power	90V AC to 260V AC 50/60Hz	
Power Consumption	14 watts max.	

Table 3. **MX2456RM** Electrical

FRONT PANEL



REAR PANEL



4.1 FRONT PANEL CONTROLS

There are two sections on the front panel of the **MX2456RM**: input-select and switcher-control. The buttons within the input-select section allow for the actual switching of the source signals. The buttons within the switcher-control section allow access to the switcher setup features.

4.1.1 VIDEO SELECT MODE

By default, video and audio inputs connect to video and audio outputs simultaneously. If needed, the user may select video and audio inputs separately using AUDIO BREAK-AWAY mode. The user can select any video input by using the input select buttons located on the front panel.

4.1.2. AUDIO BREAK-AWAY MODE

This mode allows independent selection of video and audio inputs. After selecting the AUDIO BREAK-AWAY mode, the user may select any audio or video input for switching.

4.1.3. EQUALIZATION MODE

Video signals are connected from input to output through a video amplifier along with an equalization circuit. This allows the user to equalize video signals for each of the inputs according to the distance (cable length) from the video source (PC) to the switcher.

4.1.4. AUTO-SWITCH MODE

If AUTO-SWITCH mode is turned ON, the input previously selected by the incoming video signal will connect to the output automatically.

If the user does not previously select the AUDIO BREAK-AWAY mode, the same number of audio inputs will be connected to the audio output.

4.1.5. AUTO-ROTATION MODE

The user may select AUTO-ROTATION mode with a preset rotation time. If this mode is selected, then all video inputs connected to the video output will be selected alternately. Audio inputs will simultaneously connect to the audio output along with video inputs if the user did not previously select AUDIO BREAK-AWAY mode.

4.1.6 AUDIO VOLUME CONTROL MODE

This button allows the user to control the audio volume using the UP or DOWN buttons. To increase the volume, push the UP button and to decrease the volume, push the DOWN button.

4.1.7. SYNC DELAY MODE

The default SYNC DELAY mode is off which means the video portion of the video signal and the sync portion of the video signal are connected to the output simultaneously. The **MX2456RM** Switcher employs a SYNC DELAY mode to avoid a “glitch” effect typically associated with switching between video sources.

A typical connection first disconnects the current input selection from the output. Next, the sync signals from the new input are switched to the output. The sync delay time is the amount of time to wait between switching the sync signals and switching the video signals. The user may select a delay time from 0.5 seconds to 2 seconds.

4.1.8. BEEP ON/OFF MODE

If the BEEP ON/OFF mode is selected, each control on the control panel will beep when pressed.

4.1.9 FACTORY RESET MODE

This mode clears all data from memory, which was previously set by the user and returns the switcher to the factory-preset position. To return the switcher to the FACTORY PRESET mode, turn OFF the power, press the RESET button, turn power ON and then release the RESET button.

APPLICATION DIAGRAM

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DIAGRAM 1: TYPICAL SETUP

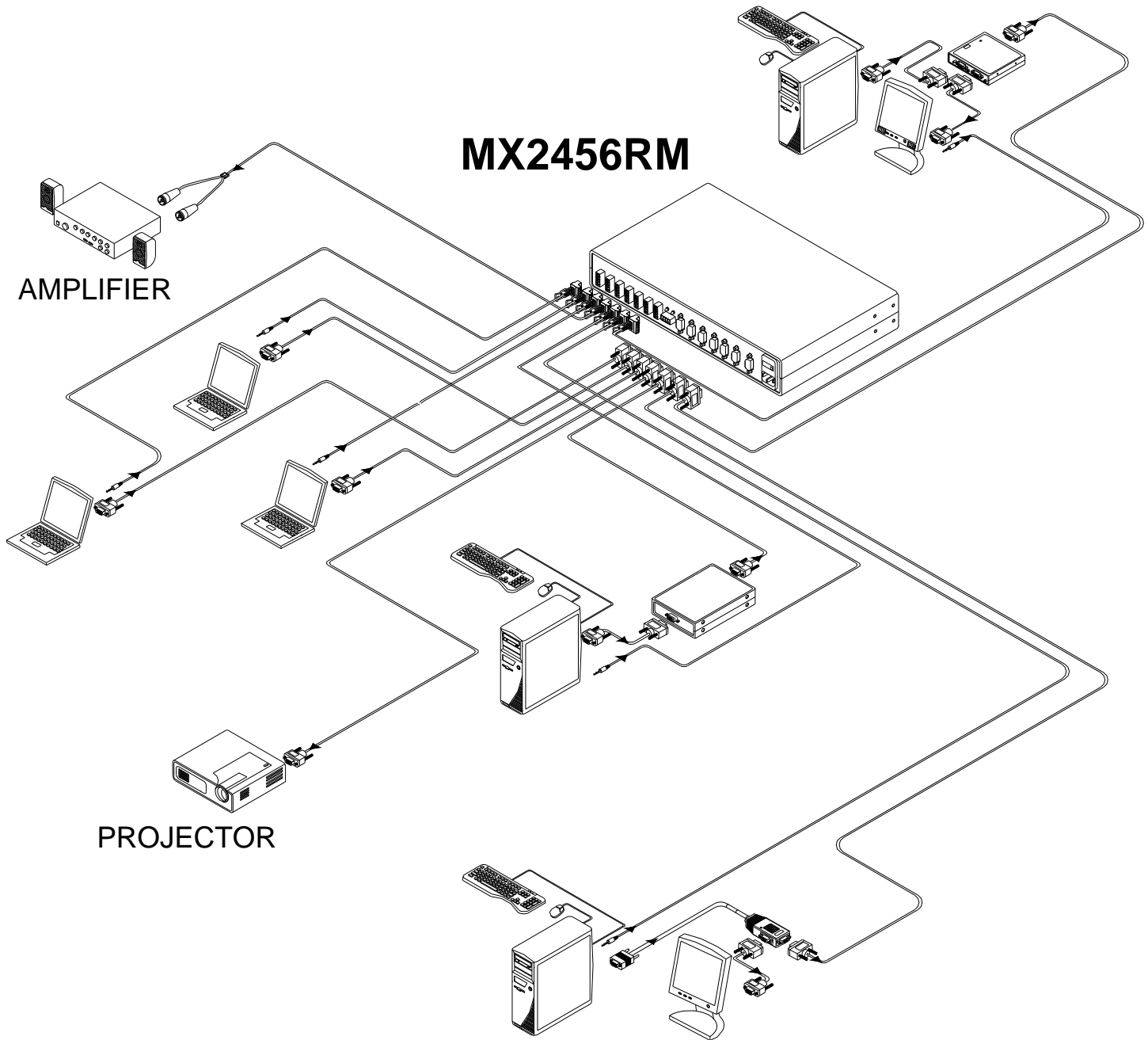


DIAGRAM 2: ACCESSORIES

Model No.	Description
	TABLE-MOUNT HARDWARE
TM1276	Table-mount bracket for 2U ½ Rack-wide
	RACK-MOUNTING ACCESSORIES
DA1298RM	Rack-mount shelf for two units side-by-side
DA1292RM	Rack-mount ears for single unit
	HIGH RESOLUTION 5 BNC to 5 BNC COAXIAL CABLE
CB4200MR	Bulk Cable 5 coaxes (500ft minimum)
CB4203MR	3ft, 5 BNC to 5 BNC coaxial cable
CB4206MR	6ft, 5 BNC to 5 BNC coaxial cable
CB4212MR	12ft, 5 BNC to 5 BNC coaxial cable
CB4225MR	25ft, 5 BNC to 5 BNC coaxial cable
CB4250MR	50ft, 5 BNC to 5 BNC coaxial cable
CB4275MR	75ft, 5 BNC to 5 BNC coaxial cable
CB42100MR	100ft, 5 BNC to 5 BNC coaxial cable
CB42150MR	150ft, 5 BNC to 5 BNC coaxial cable
	SUPER HIGH RESOLUTION 5 BNC to 5 BNC COAX
CB4400MR	Bulk Cable 5 coaxes (500ft minimum)
CB4406MR	6ft, 5 BNC to 5 BNC coaxial cable
CB4412MR	12ft, 5 BNC to 5 BNC coaxial cable
CB4425MR	25ft, 5 BNC to 5 BNC coaxial cable
CB4450MR	50ft, 5 BNC to 5 BNC coaxial cable
CB4475MR	75ft, 5 BNC to 5 BNC coaxial cable
CB44100MR	100ft, 5 BNC to 5 BNC coaxial cable
CB44150MR	150ft, 5 BNC to 5 BNC coaxial cable
	POWER CABLES
PC5301US	Power cable for US
PC5302US	Power cable for UK
PC5303US	Power cable for Australia
PC5304US	Power cable for Germany

INSTALLING YOUR MX2456RM

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Step 1. Make sure that the power input is set to the proper AC voltage for the country of usage.

WARNING: An incorrect setting may result in unit damage not covered by the warranty.

Step 2. Connect the power cord to the unit and plug it into the power outlet. The unit is now on.

Step 3. Connect the cables from the video sources and the audio sources (computers, VCR, etc.) to the input channels and connect the display devices (monitor or projector) and the appropriate audio equipment (mixer, amplifier, etc.) to the outputs. For best results, use shielded, high-quality coaxial cables.

Step 4. Test all the required switching features. If you experience difficulties or abnormal switching, you may wish to reset the unit to the factory defaults to make sure that you have not entered an incorrect operation mode.

In order to reset the switcher, turn the power off. Press and hold the RESET button. Next, turn the power back on and release the RESET button. After a brief delay, all the LEDs should blink on and off. A beeping sound will be heard indicating that the switcher has been reset.

Step 5. Verify that the display and audio equipment operates properly and results in perfect images and sound.

OPERATION

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7.1 CONTROL PANEL

1. When a button is pressed and released, a beeper will sound once.
2. Default video and audio inputs are selected simultaneously by pressing and releasing one of the video input buttons. LEDs that represent selected inputs on the control panel and connector board should turn on.
3. Press the AUDIO BREAK-AWAY button to select audio inputs and video inputs independently. If at any time you need to return the **MX2456RM** Switcher to the previous mode position, press the AUDIO BREAK-AWAY mode button.
4. Before setting the VIDEO EQ mode, you must determine the length of cable that is connected to each of the video inputs. To select the appropriate equalization, follow the steps below.
 - a) Select Video Input.
 - b) Press and release the VIDEO EQ UP button as many times as needed to turn the video equalizer to the correct position. Each time this button is pressed, equalization is set for the next 25 ft of cable. (For equalization of 100ft of cable, press the button four times; for cable 150ft, press button six times; and for cable 375ft, press the button fifteen times and so on.)
 - c) To set the selected equalization to memory, press and hold the VIDEO EQ UP and DOWN buttons simultaneously for 2 seconds.
 - d) Repeat the above steps for equalization of any video input.
5. To set the AUTO-ROTATE mode, use the AUTO-ROTATE Up and Down buttons to select the appropriate rotation time. Video inputs will rotate as they connect to the output within the selected auto rotation time. Audio inputs will also rotate, if AUDIO BREAK-AWAY mode was not previously selected. Equalization is still active.

6. If necessary, select the SYNC DELAY UP or DOWN button. To activate and set the SYNC DELAY mode to memory, press and hold the UP and DOWN button. LEDs that represent the selected time should light.
7. To activate the AUTO-SWITCH mode, press the AUTO-SWITCH button. The LED that represents the AUTO-SWITCH mode should light. If the AUTO-ROTATE mode was selected previously, it will cancel. Audio inputs will follow video inputs if the AUDIO BREAK-AWAY mode was not selected previously.
8. The AUDIO VOLUME mode will control the audio stereo volume when the VOLUME UP or DOWN button is pressed and released. The AUDIO VOLUME UP or DOWN button is between a maximum volume of +6dB and a minimum volume of -6dB. From the minimum to maximum volume, there are fifteen points. Each point represents 0.8dB. After selecting the volume, press and hold the UP and DOWN buttons simultaneously to save the setting.
9. To turn OFF the beeping sound, press the BEEP ON/OFF button. The LED that represents this button should turn OFF. To activate sound, press the BEEP ON/OFF button again.
10. To return the switcher to factory presets, turn the unit OFF, press the RESET button, turn the power on, and then release the RESET button. After a brief delay, all LEDs should blink ON and OFF. A beeping sound will be heard indicating that the switcher has been reset.

7.2 RS-232 CONTROL

The **MX2456RM** Switcher offers remote control capabilities through RS-232; the primary communication standard used by control systems and computers.

In fact, the **MX2456RM** offers more features using RS-232 than are currently available from the front panel of the unit.

The **MX2456RM** offers a terminal block using solder-free, screw-down contacts, making it extremely easy to connect the switcher to a control system or a computer in the field.

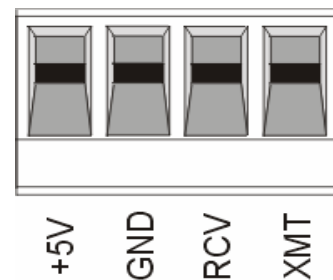


Figure 1. RS-232 Terminal Block

PIN No.	PIN Designation
1	+5V (not needed for RS-232 connection)
2	GND (Ground)
3	RCV (Receive)
4	XMT (Transmit)

The terminal block is labeled with the appropriate contact designations: Transmit (XMT), Receive (RCV), and Ground (GND). Always remember that the Transmit pin from the control system or computer must be connected to the Receive pin on the switcher control port; do not connect Transmit to Transmit or Receive to Receive.

NOTE: The contact labeled +5V is not used for RS-232 connections. This contact is used to provide DC voltage to other equipment installed within close proximity of the **MX2456RM**.

Typically, a control system or computer will offer RS-232 connections on a 9-pin D connector.

The following are typical cable pin-out designations for RS-232 connections on a 9-pin D connector. Always verify that the pin-outs for your system are correct to ensure the proper wiring.

Computer 25-pin D to MX2456RM	
Computer Pin No.	MX2456RM Contact
3	RX
2	TX
7	GND

Computer 9-pin D to MX2456RM	
Computer Pin No	MX2456RM Contact
2	TX
3	RX
5	GND

Port setting preferences for the control system or computer being used to control the switcher should be set as follows:

BAUD RATE (Bits per second)	9600
Data bits	8
Parity	None
Stop Bits	1
Flow Control	None

7.2.1 RS-232 PROTOCOL

The RS-232 protocol for the **MX2456RM** Switcher uses a simple ASCII character format.

1. Square brackets “[]” are part of the command.
2. Use uppercase letters for all commands.
3. Make sure that there is a delay of 50 ms between two consecutive commands.

The RS-232 input has a 16-character buffer and the **MX2456RM** will not execute any commands longer than 16 characters. Any additional commands are ignored until the previous command is fully processed. After processing a valid command, a text string that includes the Unit ID and “OK” will be returned.

Example:

[1OK] 1 = Unit ID
 OK = Command executed

This is the typical feedback, unless otherwise indicated.

7.2.2 PROGRAMMING COMMANDS

1. [0I#] – Change ID Number

This command sets a unique ID number to each **MX2456RM** Switcher being used. A maximum of 9 unit IDs can be assigned.

0 = Zero

= Unit ID number. (# from 1-9)

Example:

Sending the command [0I1] will reset the active switcher with a new ID number of 1. In addition, by default the switcher still has an ID number of zero.

2. [#VR] – Firmware Version

This command displays the firmware revision number installed in the microprocessor.

= Unit ID (# from 1-9, default is 0)

Example:

Check the firmware revision of Unit ID 1 by sending the command [1VR]. The system will return feedback similar to the following:

[1R1.0]

If the user sends the [0VR] command, each unit will return its version.

3. **[#SW n1 n2 n3 n4 n5 n6]** – Input Select

This is the main command of the switcher that contains all the information needed by the switcher to activate the video and/or audio sources that are connected to the unit.

- # = Unit ID (# from 1-9, default = 0)
- n1 = Input Select (# from 0-6)
- n2 = Break Away code (0 = ON, 1 = OFF)
 - 0 = Together
 - 1 = Separate
- n3 = Video or Audio (only if Break Away = 1)
 - 0 = Video
 - 1 = Audio
- n4 = Sync Delay (# from 0 to 4)
- n5 = Video Equalizer (Hex # from 0-F)
- n6 = Audio Gain (Hex # from 0-F, 0 = Mute)

Example:

Sending the command [1SW61040F] will activate switcher Unit ID 1 as follows:

1	Unit ID
SW	Define switch/select command
6	Select Input 6
1	Do NOT switch audio and video together
0	Switch video only
4	Set sync delay to 4
0	Set video equalization to 0
F	Set audio gain to F

The feedback returned will be as follows:

[1OK]

4. **[#RF]** – Factory Reset

This command will replace all settings stored in the memory of the switcher module. This is indicated by the factory default settings. The reset operation takes about 3 seconds and all previous settings will be lost.

= Unit ID (# from 1-9, default is 0)

Example:

Sending the command [1RF] command will reset the switcher with Unit ID 1 to the factory settings.

The feedback returned will be as follows:

[1OK]

5. **[#RO]** – Operation Reset

The [#RO] command will reset audio and video to Input 1, Auto Switch to OFF and Beep OFF to Beep ON. However, this command will not affect audio volume, video equalization, auto-rotation, and sync-delay.

= Unit ID (# from 1-9, default is 0)

Example:

Sending the [1RO] command resets the switcher module with Unit ID 1 in the Reset Mode with ID number eight.

The feedback returned will be as follows:

[1OK]

6. **[#An]** – Audio Breakaway

This command controls how audio and video inputs are selected. The [#An] command allows the user to control audio input and video input independently or simultaneously.

= switch number (Default is 0)

n = 1 (ON) Breakaway audio input from video input and switchers can be activated independently.

n = 0 (OFF) In this mode, the switchers are activated simultaneously. For example, if Video Input 2 is pressed, Audio Input 2 will be pressed automatically.

Example:

Sending the [1A1] command will allow the user to press Audio Input or the Video Input independently.

The feedback returned will be as follows:

[1OK]

7. [#CSDn] – Sync Delay

This command allows time delay between switching from one video source to another by avoiding an overlap of communication problems.

- # = Unit ID (# from 1-9, default is 0)
- n = Time delay interval between video sources and switching inputs
 - 0 = Sync Delay is Off (no delay)
 - 1 = 0.5 second delay
 - 2 = 1.0 s
 - 3 = 1.5 s
 - 4 = 2.0 s

Example:

Sending the [1CSD4] command sets a 2-second time delay between input selection of Unit ID 1.

The feedback returned will be as follows:

[1OK]

8. [#Bn] – Beep ON/OFF

This command activates or deactivates the beeping sound when a key is pressed on the switcher module.

- # = Unit ID (# from 1-9, default is 0)
- n = ON/OFF switch
 - 1 = turn switcher beep ON
 - 0 = turn switcher beep OFF

Example:

Sending the [1B1] command sets the beeper to the on position in the connected switcher, Unit ID 1.

The feedback returned will be as follows:

[1OK]

9. [0ASn] – Auto Switch

The [0ASn] command sets the switcher module to the ON position to detect incoming audio or video signals automatically. Using this command, the user may also operate the switcher manually.

- n = ON/OFF switch
 - 1 = turn auto switcher ON
 - 0 = turn auto switcher OFF

Example:

Sending the [0AS1] command will set the auto switch feature to the ON position to detect the incoming video signal automatically.

The feedback returned will be as follows:

[110]

10. [#SA n1 n2] – Audio Gain Save

This command will save an audio gain setting for a specified input without changing the current output setting. The saved setting will not be implemented until the next time the input is selected from the front panel.

- # = Unit ID (# from 1-9, default is 0)
- n1 = Input No. (# from 0-6)
- n2 = Audio Gain (Hex # from 0-F, 0=OFF).

Example:

After executing the [1SA6F] command, the Unit ID 1 will have an audio gain of F saved for Input 6. The next time Input 6 is selected, the audio gain will automatically be set to F.

The feedback returned will be as follows:

[1OK]

11. [#SV n1 n2] – Video Equalization Save

This command will save an equalization setting for a specified input without changing the current output setting. The saved setting will not be implemented until the next time the input is selected from the front panel.

- # = Unit ID (# from 1-9, default is 0)
- n1 = Input No. (# from 0-6)
- n2 = Video Eq. (Hex # from 0-F, 0=OFF).

Example:

After executing the [1SV10] command, Unit ID 1 will have a video equalization setting of '0' or off. The next time Input 1 is selected, the video equalization will automatically be set to off.

The feedback returned will be as follows:

[1OK]

TROUBLESHOOTING GUIDE

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We have carefully tested and found no problems in the supplied **MX2456RM**; however, we would like to offer suggestions for the following:

8.1 NO POWER

Cause: The line voltage is wrong or off.

Solution: Please use the appropriate input voltage: 90-260VAC. If there is still no power, please call ALTINEX at (714) 990-2300.

8.2 NO DISPLAY

Cause 1: The source has a problem.

Solution: Check the source and make sure that there is a signal present and all source connections are correct. If the source is working and there is still no display, see Cause 2.

Cause 2: The input is not selected.

Solution: Check the front panel LEDs and make sure the correct input is selected. If no display is present, see Cause 3.

Cause 3: Cable connections are incorrect.

Solution: Make sure that cables are properly connected. Also, make sure that the continuity and wiring are good. If there is still no display present, see Cause 4.

Cause 4: The display has a problem.

Solution: Make sure the display is powered and is turned on. If there is still no display, please call ALTINEX at (714) 990-2300.

8.3 NO SOUND

Cause 1: The source has a problem.

Solution: Check the source and make sure that it is working at an appropriate volume level and all source connections are correct. If the source is working and there is still no sound, see Cause 2.

Cause 2: The wrong input is selected.

Solution: Verify the front panel LEDs are on as expected. If Break-Away mode is on, it is possible to have an audio source that does not match the video source. If no sound is present, see Cause 3.

Cause 3: Cable connections are incorrect.

Solution: Make sure that cables are connected properly. Also, make sure that the continuity and wiring are good. If there is still no sound present, see Cause 4.

Cause 4: The destination amplifier has a problem.

Solution 1: Make sure that the destination amplifier is powered. If there is still no sound, see Solution 2

Solution 2: Set the volume of the destination amplifier to a reasonable level. If there is still no sound, call ALTINEX at (714) 990-2300.

8.4 SOUND DISTORTION

Cause 1: The source level is too high.

Solution: Make sure that the source level is below 1Vp-p. If the sound is still distorted, see Cause 2.

Cause 2: The destination amplifier provides excessive amplification.

Solution 1: Make sure the source level is high enough so the amplifier does not have to add excessive amplification, thereby distorting the signal. If there is still sound distortion, call ALTINEX at (714) 990-2300.

8.5 SOUND LEVEL IS LOW

Cause 1 Input volume is low.

Solution 1: Turn up the source volume. If the sound level is still low, see Solution 2.

Solution 2: Turn up the destination amplifier volume. If the sound level is still low, see Cause 2.

Cause 2 Poor signal transmission.

Solution: Check the cables for continuity and make sure that connections are wired properly.

NOTE Test the system by removing the **MX2456RM** from between the source and the destination amplifier. If the problem persists, call ALTINEX at (714) 990-2300.

ALTINEX POLICIES

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9.1 LIMITED WARRANTY/RETURN POLICIES

Please see the ALTINEX website at www.altinex.com for details on warranty and return policies.

9.2 CONTACT INFORMATION

ALTINEX, Inc.

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WEB: www.altinex.com

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